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Lawrence J. Ronk

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EXAMINER

PATEL, KANJIBHAI B

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/896,503
Filing Date: June 29, 2001
Appellant(s): RONK ET AL.

RONK ET AL.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/29/06 appealing from the Office action
mailed 5/17/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102 (b) as being anticipated by Tsuchikawa et al. (US 5,748,775).

For claim 1, Tsuchikawa et al. discloses a method of video object feature data generation (at least Figures 3-4, 6-7), comprising:

(a) extracting a first set of features (block 100 in Figures 3-4 stores captured image feature parameters, such as intensity values; 130 in Figure 6; column 5, lines 7-10) from a moving object detected (moving object extraction means 500 detects the object 520) in a sequence of images (column 5, lines 5-7; camera 001 is used to obtain a sequence of images as shown in at least Figure 3-4);

(b) extracting a sequences of grid blocks corresponding to motion of said object in said sequence of images (column 5, lines 18-52; moving object regain 120 is divided into a plurality of sub-regions a1, a2, a3, a4....ak representing a sequence of grid blocks as shown at least in Figures 4 and 6-7);

(c) storing said first set of features and said sequence of said grid blocks (column 5, lines 5-10; frame image memories 101, 102, etc. are used for storing feature

Art Unit: 2624

parameters and grid blocks; see 100 in Figures 3-4 and 130 in Figure 6 providing storage).

For claim 2, Tsuchikawa et al. discloses the method, wherein:

(a) said extracting of step 9a) includes extracting features in every image in said sequence containing said object (column 7, lines 40-45; a sequential repetition for entered input images provides feature extraction for every image).

For claim 3, Tsuchikawa et al. discloses the method, further comprising:

(a) for each of said grid blocks of step (b) extracting features and associating said grid-block extracted features with said grid block sequence (column 5, lines 5-62).

For claim 4, Tsuchikawa et al. disclose the method, wherein:

(a) said first set of extracted features of step (a) includes a color histogram (column 7, lines 46-59; 263 and 264 in Figure 7 provide color histogram).

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

Claims 5-7 are allowed.

For claim 5, prior art on record fails to teach or suggest, alone or in combination, a method of searching for a video object, comprising, among other things, ranking said feature vectors of said database according to the results of step c and finding video objects by an association of video objects with said feature vectors of said database together with the results of step d.

(10) Response to Argument

Appellant argues Tsuchikawa extracts (detects) a moving object in a sequence of images by updating the background and then subtracting it from the images to find the object. In contrast, claim 1 presumes an already-detected moving object in a sequence of images and is directed at storing features plus the path of motion for the object.

In response, the examiner notes claim 1 does not recite “an already-detected moving object in a sequence of images and is directed at storing features plus the path of motion for the object”. The examiner cannot make presumption of what features the Appellant presumes are in the claims.

Claim 1 recites:

A method of video object feature data generation, comprising:

(a) extracting a first set of features from a moving object detected in a sequence of images;

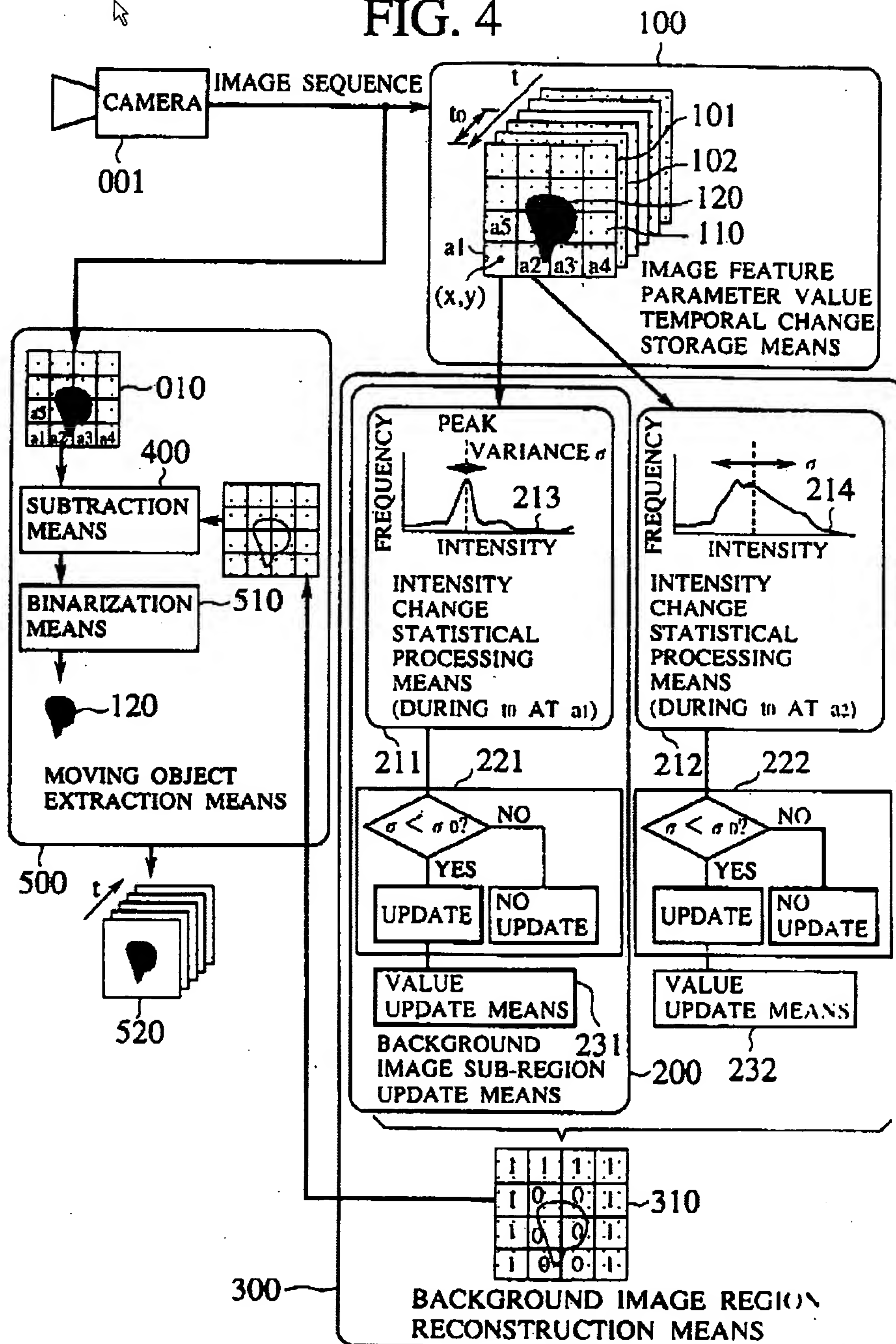
(b) extracting a sequence of grid blocks corresponding to motion of said object in said sequence of images; and

(c) storing said first set of features and said sequence of grid blocks.

Tsuchikawa discloses steps (a), (b) and (c) in Figures 3-4 and column 5, lines 5-52 in the specification. Figure 4 shows:

Art Unit: 2624

FIG. 4



As to step (a) of claim 1, Tsuchikawa using camera 001 to extract a first set of features from a moving object detected in a sequence of images. In other words, as the objects move in front of camera 001, the camera detects the sequence of images (see frames 101, 102 in time, as shown in Figure 4). The camera 001 sends the sequence of images to storage means 100. The storage means 100 stores the extracted first set of features (i.e, image feature parameter values).

As to step (b), Tsuchikawa uses a plurality of frame memories 101, 102, etc. for storing image feature parameter values for the sequentially entered input images. As shown in figure 4, the frame memories comprise a 4x4 grid block. Further, each frame memory in the image feature parameter value temporal change storage means 100 stores the image feature parameter values for each input image containing a background region 110 and a moving object region 120 which is divided into a plurality of sub-regions. The intensity at each pixel is used as an exemplary image feature parameter at each sub-regions. Tsuchikawa discloses storing of input images with features of the moving object and the updated background, which corresponds to a sequence of grid blocks or a motion path of the moving object (see grid blocks in Figure 4, a1, a2, a3, a4, and a5).

As to step (c), the frame memories 101 and 102 correspond to the storing of the first set of features and the sequence of grid blocks.

Appellant also argues Tsuchikawa does not suggest the storing of a feature set plus a motion path (not a sequence of images) for a detected object.

Art Unit: 2624

In response, the examiner notes claim 1 does not recite "the storing of a feature set plus a motion path for a detected object. These elements are not in the claim. The examiner cannot make assumption of which words could have been in the claim.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Kanji Patel

Patent Examiner

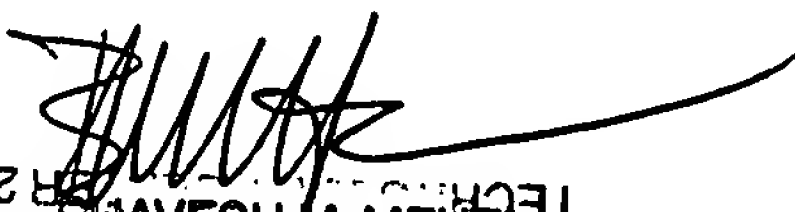

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